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ON EAST ASIAN *ORTHOBULA* (ARANEAE, CLUBIONIDAE)

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Synopsis

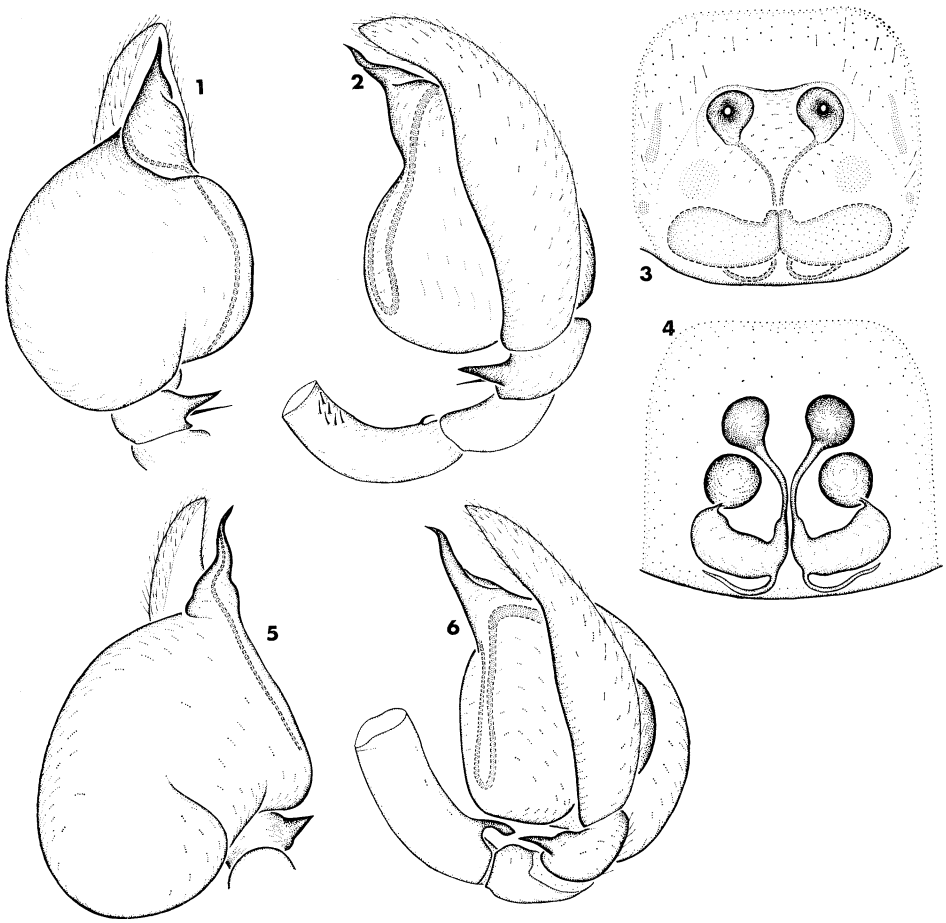
PLATNICK, Norman I. (Department of Entomology, The American Museum of Natural History, New York 10024, U.S.A.): On East Asian *Orthobula* (Araneae, Clubionidae). *Acta Arachnol.*, **27**: 43-47 (1977).

The female of the Japanese spider *Orthobula crucifera* BÖSENBERG et STRAND is redescribed and the male described for the first time; a new species, *Orthobula yaginumai*, is described from southern China.

The spider genus *Orthobula*, established by SIMON (1897) for a small litter-dwelling clubionid from Ceylon and currently containing eight described species from Asia and Africa, is of interest to arachnologists as it illustrates well our lack of knowledge of clubionid phylogeny. The spiders have closely set pairs of spines on the anterior tibiae and metatarsi, and were therefore placed by SIMON in the Phrurolithinae, but a study of the genitalia of Asian specimens (the palpi of which have never been illustrated) shows some striking similarities to those of the tracheline clubionids: the tegulum is huge and bulbous, the palpal duct looped, the embolus elongate and twisted, and the epigynal openings paired, circular, and anteriorly situated (Figs. 1-6). It is not impossible that these similarities are symplesiomorphic, but even if that were the case the discrepancy between the genitalia of *Orthobula* and the remaining phruroliths would still have to be explained, presumably by placing *Orthobula* as the most plesiomorphic member of that group. At any rate, these similarities argue strongly against LEHTINEN's (1967) placement of the phruroliths in the Gnaphosidae, and support his subsequent (1975) transfer of this group (though not the Micariinae) to his Zodarioidea (i.e., near the corrinnines and trachelines), although that transfer was substantiated only by the statement (1975, p. 29) that it was "mainly

based on ultrastructure."

I am deeply indebted to Prof. Dr. Takeo YAGINUMA and Ass. Prof. Yoshiaki NISHIKAWA of Ohtemon-Gakuin University, for donating the Japanese specimens described below. Additional material was supplied by Dr. H. W. LEVI of the Museum of Comparative Zoology, Harvard University. The illustrations are by Dr. M. U. SHADAB.



Figs. 1-6. 1-4, *Orthobula crucifera* BÖSENBERG et STRAND. 1. Palp, ventral view. 2. Palp, retrolateral view. 3. Epigynum, ventral view. 4. Vulva, dorsal view. 5-6, *O. yaginumai* n. sp. 5. Palp, ventral view. 6. Palp, retrolateral view.

Orthobula crucifera BÖSENBERG et STRAND

(Figures 1-4)

Orthobula crucifera BÖSENBERG and STRAND, 1906, p. 292, figs. 74, 469, 473 (female holotype from Saga, Saga Prefecture, Kyushu, Japan, in Natur-Museum und Forschungs-Institut Senckenberg, not examined). Yaginuma, 1960, p. 114, fig. 92.3, pl. 52.

Diagnosis: *Orthobula crucifera* may be recognized by the spine on the retrolateral tibial apophysis (Fig. 2) and the conformation of the epigynal ducts (Fig. 3).

Male: Total length 1.62 mm Carapace 0.83 mm long, 0.61 mm wide, oval in dorsal view, widest at coxae II, with ocular area abruptly narrowed, dark orange, sides with rows of deep circular depressions, margins tuberculate, posterior margin folded anteriorly. Cephalic area rounded; thoracic groove very short, longitudinal. From above, both eye rows recurved; posterior row longer than anterior. All eyes circular, subequal in size, those of anterior row seprated by their radius, those of posterior row separated by their diameter. Median ocular quadrangle wider in back than in front, wider than long. Clypeal height twice the anterior median eye diameter. Chelicerae light brown, widely separated, with three promarginal teeth and two retromarginal denticles. Endites dark orange, rectangular, with pronounced basal lobe and slight serrula on anteromedian surfaces. Labium dark orange, wider than long, invaginated opposite basal lobe of endites, with pair of spines at truncate apex. Sternum orange, strongly rebordered, slightly prolonged between coxae IV, with scattered deep circular depressions and triangular sclerotized extensions to and between coxae. Leg formula 4123, femora basally enlarged, anteriors ventrally tuberculate; femur II 0.47 mm long; all leg segments light orange, posterior tibiae with longitudinal dark stripe on retrolateral side. Tibia I with six prolateral and five retrolateral spines on ventral surface, metatarsus I with four pairs of ventral spines. Tibia II with five prolateral and four retrolateral spines on ventral surface, metatarsus II with four pairs of ventral spines. Posterior legs unarmed. Tarsi with two claws and claw tufts, without scpoulae. Posterior metatarsi with distal preening brush of setae. Trochanters unnotched. Dorsum of abdomen covered by dark orange scutum showing pair of central paramedian round muscle impressions, dark cardiac mark, paramedian transverse dark stripes at one-third of length, and posteromedian longitudinal dark square; venter with epigastric scutum and shield-like ventral scutum occupying roughly two-thirds of postepigastric area.

Six spinnerets, medians small, no colulus. Palpal femur with short, stiff ventral setae at proximal end and small ventral apophyis at distal end; patella and tibia short, globose, tibia with triangular retrolateral apophysis bearing spine below apex on proximal surface; cymbium long, narrow, bulb globose, triangular, with looped retrolateral duct and long twisted embolus (Figs. 1, 2).

Female: As in male except for the following: Total length 1.87 mm. Carapace 0.86 mm. long, 0.69 mm. wide. Femur II 0.54 mm. long. Tibia I with six pairs of ventral spines. Tibia II with six prolateral and five retrolateral spines on ventral surface. Abdomen without dorsal or ventral scuta, pale yellow with scattered dark markings, coated with short setae. Epigynum with pair of dark circular anterior depressions around openings (Fig. 3) Basal ducts of spermathecae wide (Fig. 4).

Material Examined: JAPAN: *Honshu*: Mie Pref.: Kii-nagashima-cho (April 19, 1973; K. KAIHOTSU), 1♀; *Kyushu*: Fukuoka Pref.: Wakasugi (October 14, 1970; Y. NISHIKAWA), 3♂, 3♀, all deposited in the American Museum of Natural History.

Orthobula yaginumai new species

(Figures 5, 6)

Type: Male holotype from Yim Na San, Kwangtung Province, China (June 12, 1936; L. GRESSITT), deposited in the Museum of Comparative Zoology.

Etymology: The specific name is a patronym in honor of Dr. Takeo YAGINUMA, in recognition of his numerous contributions to Asian arachnology.

Diagnosis: *Orthobula yaginumai* may be distinguished from the other described Asian species of the genus by the following characters: from *O. crucifera* by the much wider tegulum and the lack of a spine on the tibial apophysis, from *O. trinotata* SIMON of the Philippines by the abdominal scutum being uniformly dark instead of orange with three dark spots, and from *O. impressa* SIMON of Ceylon by having five rather than six pairs of ventral spines on tibia I.

Male: As in male *O. crucifera* except for the following: Total length 2.05 mm. Carapace 0.97 mm. long, 0.83 mm. wide. Femur II 0.64 mm. long. Tibiae I and II with five pairs of ventral spines. Dorsal scutum of abdomen uniformly dark brown, shiny, with small anterior pair and larger posterior pair of circular muscle impressions at front. Palpal femur without specialized ventral setae, with small ventral apophysis at distal end; tibial apophysis without spine; bulb

greatly widened, with longitudinal ridge (Figs. 5, 6).

Female: Unknown.

Material Examined: Only the holotype from southern China.

摘　要

N. I. プラトニク (Dept. of Ent., Amer. Mus. Nat. Hist., New York): 東アジア産オトヒメグモ属 (真正クモ目, フクログモ科) について。

日本産のオトヒメグモ *Orthobula crucifera* BÖS. et STR. の雌を再記載し, 同時にその雄をはじめて記載した。また, 南中国産の一新種, *O. yaginumai* を記載した。

References

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